SCRIPTR

DISTRIBUTED IN NEW ZEALAND
by

MOLYMERX Ltd.

P.O.Box 60152 Titirangi.
Tel.817-4372

DISTRIBUTED IN AUSTRALIA
by

MOLYMERX Pty.Ltd.

P.O.Box 900 Gosford. NSW 2250
11 Bourke Ave. Tel.(043) 694-888

TABLE OF CONTENTS

---------- TABLE OF CONTENTS ----------

==========--> COPYRIGHT NOTICE <--==========

A NOTE TO USERS

This documentation should help you become familiar with the Scriptr package. To help you use it to your best advantage there is a four page Table of Contents that has been cross referenced so that you may easily find anything in the documentation in a few seconds. The documentation is divided into sections that are logically arranged by subject. Further each section is divided into a number of logical paragraphs. You may quickly find anything in the documentation by referring to the section number, the paragraph number, and the page number.

To help you to become familiar with the terminology that is used in Scriptr, a Glossary has been included at the back of the documentation. Each of the modes of operation has a separate section to explain its use and each of the Printer Format Line commands is explained separately. There are six sample programs contained on the disk. The documentation takes you through through these programs to help you become familiar with all of Scriptr's functions and capabilities. Please take the time to **READ ALL OF THE MANUAL.** If you do then you will get a lot more out of Scriptr. A great deal of effort has been expended to make sure that all the routines work and that they are fully debugged. However because of the complex nature of machine language programs there is always the possibility of finding a bug in any program. If you do, please report it to us at the address listed under Modifications and we will try to fix it. We hope that you get much enjoyment from Scriptr and put it to use to make your computer system realize its full potential.

The Author
JERRY GOODWIN

LOADING INSTRUCTIONS

There are four versions of the Scriptr program on your diskette. Use the file name that is appropriate for your own hardware and printer. The versions marked (/CMD) are for the MX-80 / MX-100 and most other printers. The versions marked (/DEL) are for the Microline 80 printer. They will also work on the Microline 82A and 83A printers.

PROGRAM NAME	REQUIREMENTS
SCRIPTR/CMD	48K of memory, MX-80 or MX-100 printer with or without Graphtrax.
SCRIPT32/CMD	32K of memory, MX-80 or MX-100 printer with or without Graphtrax.
SCRIPTR/DEL	48K of memory, Microline 80 printer.
SCRIPT32/DEL	32K of memory, Microline 80 printer.

NOTE --- Use SCRIPTR/CMD for other printers.

TO LOAD SCRIPTR FROM DISK;

1. Turn on the computer.
2. Put your Scriptr disk in drive 0.
3. Put your Scripsit disk in drive 1.
4. When the DOS READY prompt appears, type the appropriate file name.
5. Press ENTER.
6. Scriptr will load and will automatically access and load Scripsit.

TO LOAD SCRIPTR FROM CASSETTE;

1. Type SYSTEM then ENTER then SCRIPS
2. Put tape SCRIPSIT in the player and press PLAY then ENTER
3. When done type SCRIPT then put SCRIPTR in the player and press PLAY then press ENTER.
4 When done type (/) then ENTER and you will be requested to tell SCRIPTR what kind of Graphics code your printer accepts. Answer the prompts. You should now be in Scripsit.

Congratulations. You are now the owner of the finest modification available for the Scripsit word processing program.

As an owner of Scripsit, you are undoubtedly aware that it has many fine features. The object of Scriptr is to enhance Scripsit without interfering with these features. To do this we have added to the Scripsit package many new routines that you will find in no other text processor. We hope that you will take the time to become familiar with them, as they will open up new areas in which you can to put Scripsit to use.

Versatility is the key to Scriptr. It gives you many tools to use for your text processing needs. Most of these tools are easy to use and require little in the way of documentation or teaching. After reading through the documentation the first time, you will be able to do most of the things that you bought Scriptr for. There are also some advanced features that are not especially hard to grasp but which will require a measure of practice and experimentation before they can be used with ease. Please take the time to **READ ALL OF THE MANUAL.** You will have trouble understanding what is going on if you do not.

Through the six sample programs provided on the diskette we have tried to give enough examples on how to use all of the routines to get you started towards proficiency with this program. First learn the simple commands, and then, when you have mastered these things, go on to the routines that require more practice. If you own a printer other than the MX-80 then you will need to do some simple Editing of the /TST files before they will work correctly. You will not be able to learn everything about SCRIPTR at one sitting. This is because there are so many commands available to you. Scriptr actually is like a text processing language and no language can be remembered in one sitting. However if you take the time to learn Scriptr you will find that you will be able to produce typeset looking copy that once was the exclusive domain of the professional printer. We hope that you enjoy using Scriptr and we welcome your comments and suggestions. If you need technical help or just need a few questions answered then feel free to call us evenings and Saturdays, or write if you prefer.

SECTION 1.Ø --- OVERVIEW ---

1.1 --- ADDED FEATURES ---

SCRIPTR, through the use of Format Lines imbedded in the text buffer to control the display and printer, adds the following features to Scripsit;

DOS RE-ENTRY
SEND CODES TO ANY PARALLEL PRINTER
CONTROL OF ALL MX-8Ø FUNCTIONS INCLUDING GRAPHTRAX
DIAL A PRINT (MULTIPLE PASS PRINTING)
FORM LETTERS
DISPLAY OF THE PRINTOUT
EDITING DURING PRINTOUT
GRAPHICS (PICTURE - GRAPHICS - EDIT)
PAUSING
MACRO'S
DISPLAY ONLY PRINTOUTS
PRINT ANY PAGE IN THE BUFFER
PRINT OUT FULL SCREEN PICTURES (REQUIRES CRAYON)

SECTION 2.Ø --- PRINTER FORMAT LINES ---

2.1 --- COMPARISON TO SCRIPSIT'S FORMAT LINE ---

Printer Format Lines are how you will control the printer through Scriptr. They communicate between you and the printer through the text. There are two kinds of Printer Format Lines -- numeric and letter. Printer Format Lines are **DIFFERENT** from the format lines in Scripsit. Scripsit's format lines control how the TEXT is to be formatted and must be placed in specific places. Printer Format lines control both the PRINTER and VIDEO DISPLAY and may be anywhere in the text. The following is a typical Scripsit Format Line.

EXAMPLE --- >LM=4,RM=73,TM=4,BM=62,J=Y

Notice that these parameters affect the text that is to be formatted. They control the LEFT, RIGHT, TOP, and BOTTOM margins and JUSTIFY the text. The following is a typical SCRIPTR Printer Format Line;

```
 Example ---  & E D W &
These parameters affect the printer.
E = EMPHASIZED printing
D = DOUBLE     printing
W = EXPANDED   printing
```

This Printer Format Line would put an Epson MX-80 into the 40 Character/line mode, (Expanded), and the printing type into Double and Emphasized. Printer Format Lines START AND END with the (&) character. The AMPERSAND (&) must be used BOTH to OPEN AND TO CLOSE every Printer Format Line. Printer Format Lines may be placed anywhere within the text except within one of Scripsit's Format Lines. The (&) character must not be used in the text at all, unless it designates the start or the end of a Printer Format Line. For a method of printing the (&) for other purposes, see the section under Graphics.

2.2 --- SPACE COMPENSATION ---

Scripsit formats Printer Format Lines just like ordinary text. Scriptr then reads the file at the time of printing and performs the desired function. Printer Format Lines are INVISIBLE to the printout. SPACES are generally sent to the printer to compensate for the spaces that the (&) character and the command letters take up. Where the characters are on the display is exactly where they will be in the printout with the exception that the Format Lines themselves will not be printed at all. The Graphics, Forms and Tab Setting routines are the only routines that do not compensate for the Printer Format Line spaces. All other routines maintain the formatting of the text just as Scripsit set it up.

ALL PRINTER FORMAT LINES MUST BE COMPLETELY CONTAINED WITHIN ONE PHYSICAL LINE IN SCRIPSIT.

2.3 --- **FILL CHARACTERS** ---

There are two FILL CHARACTERS that may be found in any place in any Printer Format Line. They are the SPACE and the PERIOD characters. When you use either of these characters they will be ignored and the next character will be processed. Use these *OPTIONALLY* to make the lines more readable. The following are some Examples;

```
& .....R E D W.....&
&REDW&
& R.E.D.W &
& R E D W  &
```

SECTION 3.0 --- **THE DISPLAY** ---

3.1 --- **DISPLAY/TST** ---

Before you read this section load in the file DISPLAY/TST that came on the diskette with Scriptr. This is a teaching program to demonstrate the display features we will be discussing. Run the program by pressing (BREAK), then (P), and then (ENTER) and follow the directions as they are given. Look at the Printer Format Lines and how they affect the display. Do this now and return here to section 3.2 when you are ready to proceed.

3.2 --- **DISPLAY CONTROLS** ---

There are many things that you can do to control the display. Listed below are all of the controls available to you and some applications that they may be used for;

KEY/ LINE	NAME	= DESCRIPTION
&1&	RESET	= Reset both timers to zero and reset pausing. FASTEST DISPLAY RATE
&2&	LINE	= Put a delay at the end of the display of every line. NOT NOTICEABLE IF ACTUALLY PRINTING
&3&	CHARACTER	= Put a delay between the display of every character. CHARACTER TIMER MAKES READING EASIER
&4&	PAUSE	= Stop at the end of this and every succeeding line and enter the Pause Mode. FOR EDITING,CHANGING RIBBONS ECT.
&5&	DEC-LINE	= Reduce the delay in the Line timer by 1/8th of the total value. SPEED UP DISPLAY
&6&	DEC-CHAR	= Reduce the delay in the Character timer by 1/8th of the total value. SPEED UP DISPLAY

3.3 --- **USES** ---

With The controls mentioned above you may turn the video display on or off, start or stop the printout at any place in the text, put a delay after every line or at the end of every character, or vary these two timers over a broad range of display rates. Each timer has eight speeds and is set initially to speed (7). You may use either timer or both in any combination at any speed.

3.4 --- **EFFECT OF DELAYS ON PRINTING** ---

The display is a way to view a document to edit it, or just to read through it. During every printout each line is displayed in real time as it is accepted from Scripsit. The delays for the end of LINE timer will only be noticed in the Error Checking and the Print-Off modes of operation because printing takes longer than the delays.

3.5 --- **CONTROLS DURING EXECUTION** ---

The display may be controlled during a printout by pressing the SAME NUMBERED KEYS during a printout as just mentioned for the format lines above. If you are changing these values during a printout, hold down the appropriate key until the execution stops and then release it. The function you requested will be performed. These features should help you get the display set to a comfortable reading rate. To turn off the display during a printout, simply press the down arrow (↓) and the display function will discontinue. To start it again press the up arrow (↑) and the display will come back on again. When doing error checking the display OFF mode is much faster because the display is not being driven.

SECTION 4.0 --- PAUSE MODE

4.1 --- **COMPARISON OF (4) COMMAND AND SHIFT** ---

The Pause mode enables you to stop a printout in order to perform some function. In order to enter the Pause mode, the DISPLAY MUST BE ON. As mentioned before, the Pause mode may be entered by executing the (&4&) command from the text or by pressing the (SHIFT KEY) during the printout. Pressing the (SHIFT) key will PAUSE for that line only and executing (&4&) from the text will PAUSE on every line from there on until you press (1).

4.2 --- **PAUSE MODE COMMANDS** ---

The Pause mode has prompt messages that are displayed on lines two and three of the display. These prompts are to remind you of most of the commands you may use from the Pause mode. A brief explanation of the commands with explanations follows;

PAUSE MODE COMMANDS

(SPACE-BAR)------- Continue execution of the printout.
(ENTER)----------- ENTER EDIT MODE and delete internal buffer.
(p)=PICTURE ------ Load and print a Graphics PICTURE from disk.
(l)=LINEFEED ----- Send a linefeed to the printer.
(L)=PRINT LINE --- Print out the internal buffer.
(D)=DELETE ------- Delete all text in the printer buffer.
(O)=PRINT/ON ----- Route printing to the printer.
(o)=PRINT/OFF ---- Route printing away from the printer.
(r)=REGULAR ------ Set Edit line length to 80 characters.
(c)=CONDENSED ---- Set the Edit line length to 132 characters.
(w)=WIDE --------- Set the Edit line length to 40/66 characters
(M)=MACRO/ON ----- Turn on the Macro function.
(m)=MACRO/OFF ---- Turn off the Macro function.
(t)=TRS-80 ------- Output TRS-80 Graphics codes.
(s)=STANDARD ----- Output STANDARD graphics (MX-80)
(1)=RESET -------- Reset Pause mode to off.
(2)=LINE --------- Turn on the end of line timer.
(3)=CHARACTER ---- Turn on the character timer.
(4)=PAUSE -------- Turn on automatic pausing at end of line.
(5)=DEC-LINE ----- Reduce the end of line timer by 1/8th.
(6)=DEC-CHAR ----- Reduce the character timer by 1/8th.

NOTE ----- Capitals denote SHIFTED entrys.

NOTE ----- The (r,c) and (w) commands above do not put the printer into the corresponding modes. They only set the length of the line that will be allowed by the Edit and Macro modes.

NOTE ----- From the Pause mode ONLY, the (4) command will turn off the ALL function which prints out the entire text buffer including the Printer Format Lines. This is the only way to turn off the ALL mode short of reloading the program.

NOTE ----- Pressing (H or h) from the Pause Mode with the Model III. cassette version will set the tape loading speed either HIGH for (H) or LOW for (h).

4.3 --- **MARKER LINES** ---

While you are still in the pause mode, notice that a line of numbers interspersed with the dash character is displayed just above and just below the (3) text data lines. The Marker Line looks like this;

123456789-123456789-123456789-

This Marker Line will help you to see where the margins occur and aid you in centering the text. Each section of the line represents 10 character positions with the dash character coming at every multiple of ten positions. The actual text that is transmitted from Scripsit is contained on the three lines between these two Marker Lines. By using these lines you may center text from one line to the next.

SECTION 5.0 --- EDIT MODE

5.1 --- **PURPOSE AND GENERAL INFORMATION** ---

The Edit mode can ONLY be entered FROM THE PAUSE MODE by pressing (ENTER). The EDIT mode allows you to change any of the characters that are on the screen, to add in a Macro statement from the buffer or to enter graphics directly from the keyboard. You may enter and re-enter the EDIT mode from the Pause Mode as many times as you wish

When you enter the Edit mode, the top line of the screen will contain a prompt that reads, "Press (Enter) To Print Message-" and a block cursor will appear on the first position of the first text data line. The EDIT cursor can pass over characters without deleting them. You have a full keyboard of upper and lower case characters. When the cursor gets to the (41st.,67th.,81st. or 133rd) characters on a line (depending on the current line length) it will disappear and no input will be allowed. To get it back you must press the LEFT ARROW (←).

5.2 --- EDIT COMMANDS ---

LEFT ARROW	Move the cursor to the left.
RIGHT ARROW	Move the cursor to the right.
UP ARROW	Move cursor to start of available line.
DOWN ARROW	Move cursor to end of available line.
AT KEY	Toggle shift-lock of keyboard ON/OFF.
ENTER	End EDITing, return to Pause mode.
BREAK	Restore MACRO to the screen.
SHIFTED BREAK	Save current line as a MACRO to buffer.
SHIFTED CLEAR	Abort of printout. Release shift key first then hold CLEAR till return to Scripsit.
OTHER KEYS	Overwrite of designated character. Previous characters are lost. All keys have auto-repeat.

MACRO's ---- When a Macro line is superimposed onto a line of text on the screen only the characters on the screen that are spaces will be overwritten by the Macro characters. When storing a Macro put only the characters that you want to be superimposed on succeeding lines onto the screen and leave everything else blank.

5.3 --- KEYBOARD ENTRY OF GRAPHICS ---

From the Edit mode you may add seven graphics characters directly from the keyboard. If you do not have a graphics printer then you can't use this function. The characters selected are the most commonly used graphics blocks. On the TRS-80 each graphic block is composed of 6 smaller squares called pixels. These pixels are arranged in two columns and three rows as shown below;

1 2
3 4
5 6

The following keys from the Edit or Insert modes will produce the following pixel combinations;

KEY	MNEMONIC	PIXELS LIT
Shifted Left Arrow (←)	LEFT	1,3,5
Shifted Right Arrow(→)	RIGHT	2,4,6
Shifted Up Arrow (↑)	TOP	1,2
Shifted Down Arrow (↓)	BOTTOM	5,6
Shifted (Enter)	CENTER	3,4
Shifted (SPACE BAR)	TOP+BOTTOM	1,2,5,6
Shifted Zero (Ø)	ALL	1,2,3,4,5,6

These combinations are best for drawing horizontal and vertical lines.

5.4 --- PRINTING DIRECT FROM EDIT ---

The Edit mode is very powerful as you may change any document right up to the moment of printing. If you spot an error you may fix it before it ruins your printout. You may use the Pause and Edit modes together as a direct typewriter mode and create entire documents without ever going back into the Scripsit program. This can be done by pressing (L) from the Pause mode after Editing a line, and then re-editing and so on. You can use the Edit mode's graphic capabilities to underline with graphics. Also you can put information into the margins and insert extra Printer Format Lines from EDIT.

SECTION 6.0 --- DISK OPERATING SYSTEM ---

6.1 --- AVAILABLE DOS COMMANDS ---

A major feature of SCRIPTR is to provide an easy to use interface with the disk operating system. SCRIPTR allows you to get Directories and perform most other DOS functions without losing your text buffer. When you have loaded in the SCRIPTR program to memory in the normal manner then also load in the DISPLAY/TST program as before if it is not already there. Then type (BREAK) and then (END) and press (ENTER). The disks should start up, the screen will clear and you will get the DOS READY prompt. Now ask the disk operating system for a DIR (A,S,I). Then type in a few more DOS commands. Try (FREE) and then (LIB) or any others that may come to mind. If you like enter BASIC. Remember that if you do, you must set Memory Size to 31,500 or less. If you have a short (ie. 4,000-5,000) byte Basic program load it in and then run it. Then type (CMD S) to return to the DOS READY prompt. Now let's do one more thing. Press the RESET botton to reset the computer. Now simply type in (SCRIPTR) and press (ENTER). You should get the original DISPLAY/TST program back on screen.

6.2 --- REINITIALIZATION ---

To reinstitute a text file simply type in (SCRIPTR) and (ENTER). If you desire to reinitialize Scripsit as well as SCRIPTR and are not concerned about losing the text file then hold down the (AT) key during the time that the SCRIPSIT/LC program is loading from diskette and Scripsit will initialize. If you desire while in the DOS you may format diskettes and even backup diskettes as well as copy files to other diskettes if single track copying is done.

6.3 --- **DOS COMPATIBILITY AND REQUIREMENTS** ---

SCRIPTR has been tested on TRSDOS, NEWDOS+, DOSPLUS, and NEWDOS80 in both single and double density and works with these systems on the Model I. computer. The Model III. version will only work on TRSDOS 1.3. Compatibility with other systems is not known. SCRIPTR modifies Scripsit in memory to correctly BOOT double density operating systems when the exit to the DOS is made. It uses the standard supervisor calls that are published in the TRSDOS manual. Scriptr requires at least 32K. of memory and any Lower Case mod.

6.4 --- **BACKUPS** ---

It is reccommended that you make a complete disk backup of the diskette containing the software that you purchased as soon as possible as it is easy to destroy a diskette. To do this consult the DOS manual for the DOS that you are going to be working with. Follow the instructions there for the backup. You may wish to only copy the SCRIPTR program off of the diskette either the 32K or the 48K. version as you may need. Be sure to never work with the original diskette that you purchased, but keep this diskette as a safe copy. If you have not already done these things, take the time to do them now. It could save you time and money.

SECTION 7.0 --- SPEED READER

7.1 --- Why a SPEED READER? It is just a natural extension of the text processing system. With Scripsit you may type in any written textual material with ease. This capability is necessary to a speed reader program as large ammounts of material must be typed in before anyone can read it. What better program to do this with than Scripsit with it's advanced text editing and formatting capabilities.

Consider also that today it is possible to transmit text through the telephone lines by the use of modems. With this program you have entered the age of electronic mail. There are a number of terminal programs available for the TRS-80 which allow the easy transmission of text files. Now you may transmit your text files via these programs and the person recieving your file at the other end may leisurely read it after it is recieved by simply entering SCRIPTR and viewing the document in the ERROR CHECKING mode.

7.2 --- **TEACHING APPLICATIONS** ---

Teachers may use SCRIPTR in conjunction with the ERROR CHECKING mode to test students at reading comprehension. The student may view a document at preset display rates figured out by the teacher and controlled from within the text. At the end of the test the student may be asked questions and then may enter the EDIT mode,clear the screen and printout a written record of his/her answers that may later be graded by the teacher. There are many exciting uses for these routines. Actually any kind of a question and answer test may be easily developed using these same techniques. In this context the SCRIPTR program should be a helpful tool to the expanding CIA (Computer Adied Instruction) field. With our CRAYON program you can create full screen graphic pictures and then incorporate these directly into a Scripsit printout. This should enable teachers to develop material very similar to what is found in textbooks. With the aid of a copier machine they will be able to create multiple copies of these materials at a fraction of the cost of school books. Because of reduced expense teachers will be able to take students into specialized areas of learning with more freedom than before. Frequently only a few pages of written material are needed to cover a specific subject. Now teachers may themselves create what is necessary to get the job done.

7.3 --- AVOIDING SCREEN WRAPAROUND ---

Here are a few tips to get more out of the SPEED READER. When using the SPEED READER you may avoid wrap around of the text line by setting the (LM + RM) values to (Ø + 64) respectively. By moving these two margin values around you can make the text lines print out at any place on the screen line that you desire. Also Scripsit automatically formats the text lines so that words are not broken in half at the ends of lines. Cutting down on the length of the line makes for faster reading speeds. Try formatting to a line length of around 35 -- 4Ø characters and see the difference.

7.4 --- ENTERING SPEED READER MODE ---

To view the document without printing it out you must enter the ERROR CHECKING mode. This is done by going to the very start of the text buffer in Scripsit and entering a (Z) followed by the Page Boundary Marker. To get an idea of what this looks like load in the DISPLAY/TST program if it is not already in memory and look at the first two characters in that file. To get these two characters into these two positions press (SHIFT UP-ARROW) and press (CONTROL INSERT or (S)), then press (SHIFTED Z), then press (CONTROL PAGE or (V). After this has been done then your program should look like the DISPLAY/TST program looks now. With a (Z) character in the first buffer position you may tell Scripsit to print the document in the usual manner but nothing will get to the printer. Only the display will be affected. This is the best mode to use in conjunction with the speed reader.

SECTION 8.Ø --- INSERT MODE ---

8.1 --- PURPOSE ---

The Insert format line is an important and flexible Printer Format Line command. There are two Insert statements. The purpose of the INSERT statements is to specify places within the document where material is to be inserted into the printout, or to both the printout and the text file. There is a teaching program called INSERT/TST on your purchased diskette so load that into memory now.

8.2 --- TWO TYPES OF INSERTS ---

Take a look through the INSERT/TST program before you do anything else with it. Notice that there are two types of Printer Format Lines both of which contain an (I or an i). The (I) denotes that only the printout will recieve the information that you type in when you are prompted at the time of execution. The (i) format denotes that both the printer and the text buffer will recieve the typed in information when it is executed. Notice that some of the INSERT statements have prompting messages contained within them. These will be displayed on the top line of the screen during execution and may contain up to 32 non-blank characters for each INSERT statement.

Now this program has been set up to create a grocery list. It could just as easily be any type of list by simply changing the prompts. It is separated into three columns and contains 3Ø entries in each column. No you don't have to type out all of those (&I.....&) statements by hand. There is an easier way to do it so follow closely. This same idea may be used to create mail labels and many other types of repeating forms with Scripsit without a lot of typing. Take a single typical line like one of the 3Ø identical lines that input the three columns of grocery list data. Now suppose that you were to create a disk file of this single line. Then you could press CONTROL REPEAT and enter the number of times that you desire to repeat the function. In this case it would be 3Ø times.

Then you could press BREAK and tell Scripsit to (L,C, document name) that was just created. This would add 30 copies of this one line file to the end of the existing file in memory. What could be easier This method can save you hours of typing time and make the creation of repetitive forms a snap.

8.3 --- **RUNNING INSERT/TST** ---

Now let's give the INSERT/TST program a sample run and examine both the printout and the text buffer when finished. Start the printout of INSERT/TST. After the routine stops it is looking for keyboard input. You may type in material exactly as you did from the EDIT mode in the previous section.

NOTE THE FOLLOWING RESTRICTION;

When using an INSERT statement be careful about using graphics from the keyboard. They are aceptable from the (&I&) statement because they will only go to the printer. They are unacceptable from the (&i&) statement because Scripsit will not allow the storage of Graphics into the text buffer.

Try using the INSERT/TST program now and answer the prompts as you are requested by each INSERT statement just as if you were creating your weekly grocery list. Press ENTER to end each INSERT and print the material. You don't have to go through the whole program but try at least five or six full lines or about twenty items. When ready to stop press (SHIFTED CLEAR) and then release the (SHIFT) key and take a look at the text buffer and the changes that you made to it with the material that you inserted. Notice that the headings that are at the top of the program for the DATE ,STORE , AVAILABLE MONEY and such have not been overwritten. This is because they are UPPER CASE (&I&) statements. However the statements that are the actual list are gone, and in their place are all of the items that you input. This is because they were LOWER CASE (&i&) statements. That is the difference between the two. Now take a look at the printed output your printer produced. Notice that ALL of the material that you typed in is there.

There are no INSERT statements to be found in the printed copy. Only the material that you typed in is there plus the brackets that were contained outside of the (&I& or &i&) statements. Notice also that the columns are neatly lined up just as they were in the in-memory program both before and after printing. The INSERT statements were all the same length in the original program. However the length of the material that you just input was not the same length for every statement and yet the columns still came out neatly arranged. Once you specify how long the INSERT area is to be then exactly that number of characters will be output both to the text and the printer regardless of the number of characters that you input when typing. Blanks will be added to the end to fill in the INSERT to the desired length. You may simply press ENTER as soon as the INSERT prompt comes up and the entire INSERT will be blank. How do you specify how many characters will be accepted by an INSERT statement? Good question. Let's try to answer that next.

8.4 --- SPECIFYING INSERT LENGTH ---

The minimum number of characters that can be contained within an INSERT statement is (3). This is because the smallest possible INSERT statement would be (&I& or &i&). Both of these statements take up three characters. Also counted as part of the INSERT line length are any characters that are contained within the prompt message.

EXAMPLE --- (&I 1234567890123 &)

In the example above the prompt message would add 13 spaces to the length of the INSERT. Also counted as part of the length of the INSERT are all of the SPACE characters that are contained within the (&I &) statement. In the previous example with the prompt message there are (2) SPACE characters. INSERT lines therefore are exactly as long as they look on the screen. This makes it easy for you to visualize how the printout will look when it is finished.

8.5 --- AVOID PROBLEMS BY SETTING SCREEN WIDTH CORRECTLY ---

There may be as many INSERT statements on a single line as you may fit in for any given line length. The maximum is about 40 for a 132 column line. INSERT statements must never start on one physical line in Scripsit and end on another or an error condition will occur.

To avoid having problems with this kind of error always make it a habit to set the video screen width to the exact width that you set for the line in the Scripsit Format Line. Remember also that the actual line length is (2) less than the difference between the (RM) minus the (LM) values. Do this to every document as soon as you start working on it and you will find that Scriptr's routines will work flawlessly for you. This is an important point and understanding it well can save you much time and trouble later.

8.6 --- THE PROMPTING MESSAGES ---

The Prompt Message that you use for either of the INSERT statements is entirely of your choosing. Here are some points to remember to avoid errors. The number of all of the characters that are not blanks that are between the (&I) and the closing (&) character must not exceed 32 non-blank characters or a PROMPT LINE TOO LONG error message will occur. Spaces are not counted as part of the prompt. To use a prompt message that has more than one word in it use the following format;

```
&I THIS-PROMPT-HAS-FIVE-WORDS &
```

Note that we used dashes between the words. This was necessary because only the non-blank characters will be stored as a part of the prompt message. Any character could have been used just to keep the words apart for clarity. The period character also works well. The INSERT statements are one of the most powerful statements in the SCRIPTR package. Note that if you use the lower case (&i&) INSERT statement that you have also produced after the printout a different version of the original program in memory. This version may be easily saved under another name and in this manner you may create many different versions of a master program with a minimum of effort on your part. You have probably already thought of many ways to put this powerful statement to use. It in effect frees you from managing the editor portion of Scripsit and allows you to concentrate on the changes only.

SECTION 9.0 --- MACRO MODE ---

9.1 --- PURPOSE ---

The purpose of the Macro statement is to add commonly used sequences of characters to lines of text so that a lot of typing time may be saved. Using Macros to create borders around a text document is one of the harder things to do with Scriptr. If you do not yet have a good working knowledge of how to use Printer Format lines, skim this section for now and come back to it when you are more familiar with Printer Format Lines.

9.2 --- SET-UP ---

Macros are either ON/OFF. The (&M&) Format Line turns on the Macros and the LOWER CASE (&m&) Format Line turns Macro's off. Scriptr initializes to the Macro-off mode of operation. Please load the MACRO/TST program into memory now so that you can look at it. To use a Macro you first have to define the Macro. This is done through the use of two Printer Format Lines. They are;

& X & --- UPPER CASE - STORE ONLY
& x & --- LOWER CASE - CHANGE TO GRAPHICS THEN STORE

These Format lines designate the next physical line in the text buffer as a Macro. The (&X&) statement simply takes the next text line and stores it to the Macro buffer in memory until you turn on the Macro command. The LOWER CASE (&x&) statement will do the same thing except that first it will search the line for any one of (11) single letters or numbers. Upon finding any of these letters or numbers it will change them into a pre-determined graphics characters. When it has searched and changed the entire line, it will store this changed graphics line as the Macro. This enables you to store within the text the necessary instructions to print graphics directly from Scripsit.

You can use keyboard entry from the Edit mode to set up the Macro and then call it from the text. The (11) letters and numbers that may be changed to graphics are listed below.

9.3 --- **CHANGING TO GRAPHICS** ---

LETTER	MEUMONIC	GRAPHIC PIXELS LIT
A	ALL	1,2,3,4,5,6
B	BOTTOM	5,6
b	BOTH	1,2,5,6
C	CENTER	3,4
L	LEFT	1,3,5
R	RIGHT	2,4,6
T	TOP	1,2
1		1,4,5
2		2,3,6
3		1,2,3,5,6
4		1,2,4,5,6

Whenever any one of these letters or numbers is found in the line following the (&x& or &X&) statement that letter or number will be changed to its corresponding graphics character. The mnemonics can help you to remember the graphics and what they stand for. The LETTER ENTRIES are the same ones that can be entered through the keyboard from the Edit and Insert modes. The four number designations were added to give a little more variety.

9.4 --- **SUMMARY** ---

So in summary here's what you need to do to use Macro's. First define a line to be used as a Macro line and store it in the buffer. Make sure that this line is stored in let us say CONDENSED if it is going to be recalled in CONDENSED. Do this by using either the (&X&) or the (&x&) statement on the line preceeding the line that is to be used as the Macro. If you use the (X) statement the line will be stored and if the (x) statement the line will be changed and then stored.

9.5 --- **TURNING MACRO'S ON/OFF** ---

Now, how do you turn the Macro function ON/OFF and how will it operate? You use the (&M&) statement to turn on the Macro function. Once it is turned on it will stay on until you turn it off or until an abort occurs. The physical line in Scripsit that contains the (&M&) statement will have a Macro line superimposed over it. Only blank spaces on the text line will be overwritten by the Macro. You can turn OFF the Macro's by executing a lower case (&m&) statement from the text. When this is done, the line containing the (&m&) will not be superimposed by a Macro line. Once turned off the Macro function will stay off until it is turned on again. Macro lines can be turned on/off DIRECTLY FROM THE PAUSE MODE by pressing the (M) or (m) keys respectively.

9.6 --- **RUNNING MACRO/TST** ---

The major use of the Macro function is to generate the graphics necessary to put borders down both sides of a page of text material. The Graphics command, which will be discussed later, is excellent for drawing the horizontal lines across the top and the bottom of the page. Take a look through the MACRO/TST program that is in memory. This program has been set up to separate the text material into groupings on the left and right side of the paper with a graphics line down the middle. When printed out, it will completely enclose the text with a graphics border that has several different characters. It is generated completely from within the text of Scripsit with no user intervention. You will, of course, need a graphics printer to make a printout. If you do not have a graphics printer you can still study the way Macro lines are used by putting the Scriptr program into the Error Checking mode. Do you remember how to do that? It was discussed in the section under Speed Reader. Put a (Z) and a DOWN ARROW (↓) into the first two buffer positions. Now start the printout in the usual manner. Press (4) immediately so that there will be a pause after each line. As each line executes watch it closely.

You will see the line after the (&x&) statement changed into its corresponding graphic characters. On each succeeding line, after the line has fully displayed, you will see the Macro installed over the text line as soon as you exit the Pause Mode. Then it will continue to the next line. The process will continue until it reaches the last line of the page, which turns off Macros and so does not have a Macro on it. Watch it run several times in order to get a feel for it. If you have the appropriate printer then do a real printout and watch what the printer produces as each of the lines executes and also look at the printout afterwards to see how all of the different statements interact to produce this amazing capability.

10.0 --- GRAPHICS MODE ---

10.1 --- USES ---

The Graphics mode is not just for Graphics but allows to you to output any code between (00H and FFH) to the printer. You may output a number of different codes or a string of the same code or any combination of the preceding. You may create graphics pictures,access special character sets,or control any printer function with this command. You may draw lines of graphics or access any special character even if there is no way to enter the character form the keyboard. You can use the Graphics Mode to access the bit-plot graphics of the Graphtrax Roms on the MX-80 or MX-100 or to underline with any character. You can also execute repeating graphics characters within pictures in a very consise format. If you own a printer other than an MX-80 or MX-100 then this will be the primary way that you will program the printer.

10.2 --- **THE G/g TYPES** ---

Every Graphics line must start and end with an (&) character. There are two types of Graphics Format Lines. They begin with either a (G) or a (g) as the command letter. Both include numeric operands. The UPPER CASE (G) type is not space compensated and the LOWER CASE (g) type has (7) spaces output before it to compensate for it's space in the text. Most applications require the (G) type.

10.3 --- **COMMAND LETTER** ---

There are three logical parts to a Graphics Format Line. First there is the (G) or (g) letter commamd. This tells Scriptr that this is a Graphics Line as opposed to some other Format Line.

10.4 --- **REPEAT COUNTER** ---

The second part of a Graphics Format Line is the repeat counter. This is a two digit hexadecimal number such as (0A). The range of values can be anything from (01 to FF). This number will tell Scriptr how many times to repeat the other codes that will follow it. It is always the first number that follows the command letter. It can be changed any number of times within a Graphics Format Line by simply using the LOWER CASE (g) code. Any number within a Graphics Format Line that follows immediately after the (g) code will be considered a new repeat counter.

10.5 --- **THE CODES** ---

The last major component is the actual codes you want to send to the printer. These codes look like the repeat counter codes, but the routine will use them differently. Every number code that follows the repeat counter until the next (g) code or the end of the line will be considered as a valid code, converted to Hexadecimal and then output to the printer. ALL HEXADECIMAL LETTER DESIGNATIONS MUST BE IN UPPER CASE ONLY. The codes are ALL TWO DIGIT HEXADECIMAL codes between (00 and FF).

NO punctuation or suffixes are ever included in the operands such as the (H) suffix. Perhaps at this point an illustration or two would help to clear up your questions.

```
EXAMPLE1--- & G (REPEAT)(code)(code) g (REPEAT)(code)(code)&
EXAMPLE2--- & G (Ø4)    (DF  )(AØ  ) g (Ø1    )(1B  )(41  )&
EXAMPLE3--- & G Ø4 DF AØ g Ø1 1B 41 &
EXAMPLE4--- &.G.Ø4.DF.AØ.g.Ø1.1B.41.&
```

10.6 --- **EXAMPLE 1** ---

The first example above is done in mnemonic form. Notice that there is a (G) to designate the Graphics statement. This is followed by a repeat counter and then two codes. Then the (g) resets the repeat counter and so the next value is the new repeat counter. This is then followed by two more codes and the line is ended.

10.7 --- **EXAMPLE 2** ---

The next line substitutes some typical values for the mnemonics. Notice that under the repeat counter we have a value of (Ø4). This means that the codes to follow it will be repeated four times each. The two codes that directly follow it are graphics codes for the MX-8Ø. Each one will be repeated four times. Next is the (g) which is the command for resetting the repeat counter. So the next number value, which is (Ø1), will become the new repeat counter. The next two values are codes to control the printer. They are the ESC code and a letter code. They will each be repeated only once. Lastly the line is closed up with the (&) character.

10.8 --- **EXAMPLES 3-4** ---

The next two lines remove all of the () and many of the spaces and look exactly like typical Graphics Format Lines will look in your programs. The third example uses the space character as a fill character and the fourth line uses the period character as the fill character. These two fill characters may be used in any combination for the sake of clarity.

SECTION 11.Ø --- DIRECTING OUTPUT TO THE PRINTER ---

11.1 --- PURPOSE ---

Scriptr gives you the choice of redirecting printer output away from the printer. This can be an advantage. This is done through the use of two Printer Format Line statements and a special marker in the First Buffer Position. They are called Print/ON and Print/OFF. They allow you to print out any page in the buffer without printing all of the pages in between and your headers,footers and page numbers will all be in place.

11.2 --- USING PRINT ON/OFF ---

They are designated in a format line by a (&P&) for ON and by a LOWER CASE (&p&) for OFF. When printing normally the entire text buffer is sent to the printer from beginning to end. However a special OPTIONAL mode exists in Scriptr whereby you can send part of the buffer to the printer. The text will still be formatted and sent by Scripsit but certain parts of it will never reach the printer. PRINT ON/OFF lines MUST be used along with a SPECIAL MARKER in the First Buffer Position. Usually this marker is the LOWER CASE (p) followed by Scripsits PAGE BOUNDARY MARKER but (Z) may also be used. The marker in the first position turns off the printing from the start of the printout. Then on the line before where you want it turned on again you use a (&P&) in the text to turn it ON. You may use headers and footers and these will be in their proper place and will have the proper page numbers. The simplest way to restart the printing is to thumb through the file until you get to the place where you want to start printing and press (SHIFT) to enter the Pause Mode. Then set the printer to TOF and send the correct number of linefeeds for your margins and then press (O) to turn on the printing and (SPACEBAR) to continue. This manual method reqiures no special marking of the text except the First Buffer Position. Thus you have both an automatic and a manual method for redirecting the output. Now if you need a reprint of just (page 7.) of a document you don't have to print all the text.

SECTION 12.0 --- ERROR CHECKING ---

12.1 --- GENERAL ---

As you know, Scripsit does a mandatory check for errors that affect its own format lines each time that you print out a document. You cannot print out a document if there is a Scripsit format line error in it. Scriptr allows you to check for errors optionally if you want to thus saving time if you know a document is error free. Normally Scriptr checks every Printer Format Line for errors every time that a document is printed. This is done during the printout of a document. It will abort a printout if it finds a Format Line error during printing. For this reason you may wish to do a search of the document first if you are not sure it is error free. During this check the document will be displayed to the screen at user selected speeds and if an error is found anywhere in the document it will show you the error and take you to the place in the document where it occurred.

12.2 --- HOW TO ERROR CHECK A DOCUMENT ---

Here's how the Error Checking mode works. First, place a (Z) into the first position in the buffer followed by the page boundary marker. Now you are ready to check for errors. Error checking may be used in conjunction with any of the other display features to give you a fast or slow check. For instance, if you turn off the display by pressing the down arrow ( ), you will get the FASTEST POSSIBLE check. If you press (1), the lines and characters will be displayed with no timing delays. This goes at about five or six lines per second. If you use timing delays, the display can be much slower. The choice is yours. The Error Checking mode is very much like the Print/off mode. The entire document will be printed by Scripsit with the output being directed away from the printer. In this way you are giving the program a dry run, and if there are any errors it it they will show up before you waste a lot of time and paper printing the document. Load in the DISPLAY/TST program again and notice that it is already in the Error Checking mode. It is a good idea to put the (Z) and the page boundary marker in the first two buffer positions for every document you create, while in the creation process. Because in the Error Checking mode you can stop at any place within the text where you have a Printer Format Line and press (BREAK), (P) and (ENTER) to check for errors.

Nothing will go to the printer, and when the document has been checked you will be returned to the place where you were when you started, and you can continue with the creation of the document. Note that the CASSETTE versions will always return the cursor to the start of the buffer. When you are ready to print the document, remove the (Z) by putting the cursor over the (Z) and press (CONTROL) (DELETE) (LINE).

12.3 --- **ERROR DISPLAY EXPLANATIONS** ---

When Scriptr finds an error, it will stop displaying the letters to the screen on the exact character that caused the error. If the display is off, you will not see this, but regardless of whether the display is on or off, the top line of the screen will clear and one of the THREE ERROR MESSAGES will appear there. Two characters will appear at the end of the error message with the (/) character between them. The first character is the character just preceding the error and the character after the slash is the actual character that caused the error. You must press (SHIFT) (CLEAR) in the usual manner and then release (SHIFT) and the normal Scripsit display will return to the screen. The cursor will come back on and will be located on the line directly below the line that the error occurred on. Remember the two characters that were shown to you by the error routine, find the error and fix it. Now look through the DISPLAY/TST program and at any point insert the following Printer Format Line.

& Q &

This is not an acceptable command and it will cause an error if you try to print it. Now begin the display and wait for the error to be displayed by Scriptr. Notice how easily it found your error. Now try it again, but turn off the display with the down arrow ( ). Either way, you can easily find the error and fix it. Every attempt has been made to make this Error Checking routine as painless as possible. Try a few errors of your own in the program and see how easily they can be found.

SECTION 13.0 --- PICTURE MODE

13.1 --- PURPOSE ---

The Picture routine is one of the things that sets Scriptr apart from all other text processor programs. It allows you to add in full screen Pictures, bar graphs and pictorial aids to reinforce textual material. The files that are loaded by this routine must be created by our CRAYON program. Crayon allows you to draw anything that you want onto the screen and then save it to tape or disk. You can also create full cartoons with it and then run these from a Basic program at Assembly Language speeds. Crayon is the most sophisticated Graphics Editor that you can buy for your TRS-80 computer system.

13.2 --- HOW TO USE PICTURE ---

To use Picture, press (SHIFT) to stop the printout and from the Pause mode press (p). You will be prompted to enter a filespec. Enter the SCREEN/TST filename for demonstration purposes. (Make sure that the SCREEN/TST program is on a diskette that is currently in one of your disk drives. Then press (ENTER).

NOTE cassette users will get a READY CASSETTE prompt and then should put SCREEN/TST into the player and press (ENTER). The following information will be the same for both systems. Please note also that Picture files cannot be loaded directly by Scripsit as they are COMMAND files.

After loading you will see a screen of graphics on the screen. Notice that there is a left arrow (←) at the end of the last line. This signals that the Picture is finished.

If you didn't use this, the entire contents of the screen would be printed including the empty lines. At this point there is no prompt displayed but the program is waiting for your input. Enter a (y) or a (n) to indicate whether or not a printout is desired. If you enter (n) you will be returned to the FILESPEC prompt. From the FILESPEC prompt you may press (BREAK) to abort back to the Pause mode or load in another file. This gives you the capability to thumb through several files if need be and then print out the one that you want. If you press (y), the printout will immediately proceed. The printout will be centered on the available line whether it is in the Condensed mode or the Regular mode. Either (8 or 34) spaces will be added to the left margin for this to occur. When either the left arrow or the end of screen is encountered the printout will abort and return you to the initial FILESPEC prompt. You may then repeat the entire process, abort to the Pause mode or press (CLEAR) to redo the line of input if a mistake was made in typing in the file name.

13.3 --- MERGING PICTURE FILES TO SCRIPSIT ---

By setting aside an appropriate number of blank lines in Scripsit you can fool Scripsit into thinking the page length is right. Here's how to do it. To do this use the (p) Print/off function at the start of the blank lines and also at the end of the lines use the (&4&) Format Line to stop the display and signal the end of the blank lines. Now press (0) from the Pause mode to turn on the printing. Next enter the Picture mode by pressing (p) and load in and printout the desired picture. When you return press (1) to reset pausing then (SPACE BAR) and the printout will proceed where it left off with Scripsit completely fooled.

SECTION 14.Ø --- ERROR MESSAGES ---

14.1 --- THREE ERROR MESSAGES ---

These are the three error messages with explanations of how they can occur.

ERROR (1)= Improper Character in a Printer Format Line.
ERROR (2)= Non-Hex Digit in a Format Line.
ERROR (3)= Prompt Line Too Long.

14.2 --- ERROR (1) EXPLANATION ---

This error message means that in processing the commands within a Printer Format Line a character that is not an acceptable command was encountered before the closing (&) character. The first character that is displayed before the (/) is the last acceptable character and the character after the slash is the one in error. Remember these two characters, because they will help you to find the problem quickly. When ready to proceed after an error has occured, press (SHIFT) (CLEAR) and hold (CLEAR) down while releasing (SHIFT) until the text comes back on the screen. The cursor will come up on the line directly below the line on which the error occured. This applies for all error situations. Find the error and fix it. It is impossible, EXCEPT when running in the ALL mode to print out a document containing an error. Here is a list of all of the acceptable command letters and numbers.

A,B,b,C,c,D,d,E,e,F,G,H,I,i,L,M,m,N,O,o,P,p,R,r,S,T,W,w,X,x,-,
1,2,3,4,5,6,7,8,space,and period.

NOTE This applies to the MX-8Ø version only The character after the slash in a ERROR (1) message will never be one of the above. Sometimes when you forget to close a printer format line you will get the left arrow as the character in error. This means that you forgot to close a format line or that your video line width and your Scripsit format line width are not the same and that your format line is wrapping around.

14.3 --- **ERROR (2) EXPLANATION** ---

This error happens when you use a character that is not a correct HEX-Digit in one of the five routines that accept Hex-Digits as numeric operands. The routines that use them are as follows.

NUMERIC ROUTINES = T=tab setting N=Page numbering L=Line spacing F=Forms G=Graphics

When this error occurs, find the incorrect digit (usually a typo or lower case) and fix it to the proper value.

14.4 --- **ERROR (3) EXPLANATION** ---

The "--Prompt Line Too Long--" error can only occur within an Insert line and has two causes. First if the PROMPT is more than 32 characters. The Insert line can be of any length up to a full physical line, but the SUM of the NON-BLANK characters within the Insert format line must not be more than 32 characters. Second, you may have forgotten to close up the Insert line or may have allowed it to wrap around another line. In this case, an error will generally occur because the routine will pick up all non-blank characters and include them as part of the prompt. When a closing (&) character is missing, either this error or ERROR (1) will occur.

SECTION 15.0 --- MODIFICATIONS ---

15.1 --- **CUSTOMIZING CONSIDERATIONS** ---

You may wish that your version of Scriptr had specific controls for all of it's software functions just as this master program has preprogrammed functions for all MX-80 software controlled commands. Due to the high costs of producing many different versions of a program, there is only one version being offered through Instant Software at the present time. Pioneer Software however offers several versions for the following printers and more are forthcoming soon.

MICROLINE 80 and MICROLINE 82A
PROWRITER
DAISY WHEEL II.
MX-100

If you want the convienience of preprogrammed commands for all of your printers functions, this is possible in most cases. Here are some restrictions.

1. Your printer must have additional functions available that are not covered by Scriptr's routines.
2. Your printer must use the TRS-80 Parallel Port only.
3. We reserve the right to accept or not accept any order for Custom Modifications based on available time and testing capabilities.
4. All orders must be accompanied by a check for $25.00 over and above the cost of the program. No discounts are allowed on Custom Orders.

Some printers simply do not have enough functions available to make this practical. However, there are a number of very versatile printers on the market with commands that are different from those of the MX-80. To change Scriptr's preprogrammed Epson functions to work correctly with other printers, in all cases, requires a reassembly of the original source code and considerable programming time. This can only be done correctly if you send in a sheet listing all of the Control Code Sequences that your printer responds to. To insure correctness of this information send a photo-copy of the documentation that is appropriate. The changes necessary for any given printer are considerable and require custom programming, that could not possibly have been included in the documentation in an intelligible form. No single program could possibly cover the myriads of different command sequences necessary to custom design a program for all of these different machines. Here is a list of all of the information to include;

15.2 --- **INFORMATION CHECKLIST** ---

FULL NAME and ADDRESS

PHONE NUMBER in case of problems.

NAME and MODEL of your printer.

NAME and MODEL of your computer.

YOUR CHECK

DOCUMENTATION --- One or more pages giving the name of each desired function and the control code sequences that your printer will recognize to perform these functions. DOUBLE and TRIPLE check this information. Let us know whether or not an ESCAPE character (1BH) or trailing zero is necessary before or after any given sequence. Tell us if you have GRAPHICS capability, and what range of codes are considered as graphics. Tell us whether your printer can backspace,underline,feed 1/2 lines or reverse. Be thorough. The more information that you are able to provide us with, the better your version will turn out. If you neglect to send us any of the information that we need to compile your version, there will of necessity be a delay while we attempt to get this information from you or from other sources. You should allow several weeks for delivery, because these modified versions are done on a one-at-a-time basis. Please be patient.

Do not send this information to Instant Software as they are not set up to do this work or handle the letters. All orders should be accompanied by a check or a money order. We are not set up to handle credit cards. You should backup your version of the program and send in the original diskette. This diskette and the documentation necessary to explain the custom changes will be sent back to you. If we make mistakes that necessitate returning the program for further changes, this will be done at our expense. If you are not satisfied with the modified program for any reasonable cause, return it with the documentation and an explanation, and your money will be refunded. Remember that all versions of Scriptr and all versions of the documentation are copyrighted. No copying of the original or of the modified versions is permitted except by the original purchaser for his own personal use.

15.3 --- SEND TO ---

MAKE CHECK TO -- JERRY GOODWIN
PIONEER SOFTWARE
OUR ADDRESS -- 1746 N.W. 55th. AVENUE #204
LAUDERHILL, FLORIDA
33313

SECTION 16.0 --- UNDERLINING / SUB+SUPER SCRIPTING ---

16.1 --- BY CHANGING THE LINESPACING ---

Underlining can be performed on the MX-80 without Graphtrax and several other printers by changing the spacing between the lines to a smaller increment and then printing dashes directly below the material that is to be underlined. Consider the following example.

EXAMPLE ---

```
This message will be underlined.& L 06 &
---- ------- ---- -- ----------& L 0B &
```

16.2 --- EXPLANATION ---

Notice that at the end of the first line we set the spacing to 6 dots/inch. This will make the dashes print right below the first line. You may use a different spacing if you perfer another. At the end of the second line, the line spacing was returned to the normal 12 dots per line. You can use any character to do the underlining. If doing the underlining causes problems with your page length, consult the paragraphs on "Line Spacing" in that section. In addition you may even underline with graphics. Consider the following example.

```
EXAMPLE --- This will be underlined by graphics.
            & G 24 A3 &
```

16.3 --- **UNDERLINING WITH GRAPHICS** ---

Notice that in this line that we didn't have to change the line spacing, although we could have if we wanted to. We used the Graphics Format Line statement to create the graphics. We set the Repeat counter to 24H or 36 characters. Count the line, including the spaces, and you will see that it contains 36 characters. We then used the (A3H) code which is the top two pixels graphics code for the MX-80 as our character. That's all that there is to it. You could also have used the graphics from the Edit mode directly during the printout. This routine is far more versatile than the underlining commands found in other modifications to Scripsit.

16.4 --- **SUB + SUPER SCRIPTING** ---

You can also use the MX-80 to do sub and superscripting using the same technique of changing the line spacing before and after the line. Consider the following Example;

```
                    super                    &L06&
        This will be       scripted.         &L0C&
```

Subscripting can be done in the same manner only in reverse. This is the only way to sub or superscript on an MX-80 or MX-100 with or without Graptrax.

SECTION 18.Ø --- EPSON COMMANDS ---

17.1 --- **FOR ALL USERS** ---

Please READ THIS SECTION even if you don't have an MX-8Ø printer. The following section contains all the commands included within Scriptr for use only with the Epson MX-8Ø printer. Some of the code sequences for other printers may be the same as the sequences used for the MX-8Ø. If this is the case, you might be able to use some of these preset routines on another printer.

NOTE There are (6) CONTROL CHARACTERS that have been set aside for a special purpose in the MX-8Ø version of this program. If you have a printer other than an MX-8Ø and are using this version then you will have to turn off all (6) of these characters with a Format Line at the start of every document. The Format Line to accomplish this follows;

CONTROL CHARACTERS **(OFF)** = &o&
CONTROL CHARACTERS **(ON)** = &O&

17.2 --- **CONTROL CHARACTERS** ---

There are (6) CONTROL CHARACTERS that act as direct contol functions from within the text. The first three listed below can be used with a standard MX-8Ø but the remaining three require the Graphtrax Roms. Please note the controls and their functions listed below;

DOUBLE PRINTING	>	GREATER THAN
EMPHASIZED PRINTING	<	LESS THAN
REGULAR / CONDENSED	#	POUND SIGN
ITALICISED PRINTING	@	AT SYMBOL (SHIFTED Ø)
CONTINUOUS UNDERLINING	*	ASTERISK
WORD ONLY UNDERLINING	!	EXCLAMATION MARK

All six of these controls act as toggle switches for the corresponding functions and may be found anywhere within the text buffer except within one of Scripsit's format lines. Additionally the GREATER THAN sign may not be the first character on any line due to it's conflict as Scripsit's format line marker. When CONTROL's are (ON) then the corresponding function will be executed and a SPACE character will be output to compensate for the space that the CONTROL marker took up in the text. Therefore you can use them on justified lines of text without disturbing Scripsit's formatting. When CONTROL's are (OFF) then all six characters will simply be printed as they are and no functions will be activated. Initially CONTOL's are (ON) and will remain that way unless you change them. Reloading Scriptr from disk will always turn them all on again.

17.3 --- **DIAL A PRINT** ---

DIAL A PRINT is a special feature that works with many printers that enables you to reprint lines of print several times in order to darken the image on the paper. Here are some requirements for it's use;

1). Your printer **MUST** be able to separate (CR) from (LF).
2). If you have an MX-80 then you must have the special EPSON separated cable with metal connectors to use it.
3). You must have the switches set correctly.
4). You must place the following marker on the first line of the text you desire to be printed to notify SCRIPTR that you are using DIAL-A-PRINT.

MARKER = % DIRECTLY followed by a number between (0-9). If the very next character is not a number between (0-9) then the (%) sign will print normally. The NUMBER represents the number of times you wish for the line to be repeated. Using (0) will print the line only once. If your printer's switches are set for (CR) but NO (LF) then you MUST put on the FIRST LINE OF THE TEXT the (%) marker folowed by some number or else the lines of print will print out on top of each other.

The relative placement of the (%) marker on the line is unimportant. You can also switch back and forth and repeat succeeding lines by differing ammounts. The advantage of this feature is that on an MX-80 you can use SINGLE PASS printing, repeat the line several times and get better letter quality than with the Emphasized type font. Also you can use ribbons way beyond the point where you would have thrown them away previously. Actually using Single pass printing with (4-5) repeats of the line and an old worn out ribbon produces nearly typewriter quality on the MX-80. This manual was photo-offset from a manuscript produced in this manner.

17.4 --- GRAPHTRAX ONLY FUNCTIONS ---

BACKSPACING A Printer Format Line has been added to allow Graphtrax users to backspace and then overstrike any character with any other character. The Format Line is as follows;

&bxx&	=	GENERAL FORMAT
&bØ/&	=	SLASHED ZERO'S
&bb/&	=	SLASHED b's
&B=/&	=	NOT EQUAL SYMBOL
&b &	=	TURN (OFF) BACKSPACING

Whenever the first (x) character is found in the text it will be overstruck automatically with the second (x) character. If you leave the two (x's) blank then Backspacing will be turned (OFF). Initially Backspacing is (OFF).

RESET The MX-80 with Graphtrax can execute a POWER-ON reset to cold start settings. The Format Line to accomplish this is as follows;

&r&

This function should only be used on an otherwise blank line.

17.5 --- GENERAL INFORMATION ---

These additional commands are just for the MX-80 and will generally not work with other printers. With these commands, you may excerise all 12 different type fonts, set horizontal and vertical tabs, change the spacing between lines, set the number of lines per page, ring the bell, and force page and line breaks at will. None of these commands are difficult and all use logical mnemonics that are easy to remember. The general rule that capitals denote an on condition and lower case letters denote an off condition is used throughout Scriptr.

17.6 --- USING SAMPLE/TST ---

If you have an Epson MX-80 then load the SAMPLE/TST program, that came on your purchased diskette, into Scripsit. Before you read this section, print out a copy of this program. As the program runs you will be asked to type in some information as the Insert statements execute. When done, look at the printed copy that you produced. SAMPLE/TST exercises most of the statements that are especially for the Epson MX-80. Take a look at the program as it is in memory. This can give you some insight into how the commands that will be discussed in the following section work. Are you ready to go on?

17.7 --- NUMERIC OPERAND ROUTINES ---

HORIZONTAL TABBING FORMAT = & T xx xx xx xx &

Tabs may be set on the MX-80 by opening a Printer Format Line with the (&) character and following this with the letter (T). After this, you should specify the tab settings in accending numerical order with lowest not less than 1 and highest not greater than 127. Close up the Printer Format Line with the (&) character. Remember that the numeric operands entered into Printer Format Lines are always in HEXADECIMAL, never in DECIMAL. Also remember that SUFFIXES and PUNCTUATION ARE NEVER USED.

If the number is a single digit number, such as 8, it must be entered as Ø8. Every numeric designation must occupy 2 digits in the Format Line. THIS INFORMATION APPLIES TO ALL NUMERIC OPERAND ROUTINES IN THIS SECTION. When you are ready to use your tabs, simply open a Printer Format Line with the (&) character followed by the letter (H) for horizontal tab. Close the line up and the printer will be tabbed to the next tab stop. You may concatenate these tabs by grouping them together. This will enable you to tab across to the third or fifth tab without typing anything in between.

When you are working with columnar material, you can set up the file so that, on each line, there are items which are separated only by the (& H &) Printer Format Line. Then you can easily change the spacing between columns during the printout by changing only the variables entered through the (&T&) Format Line. This is much easier than going through the columns and changing each line with the editor in Scripsit.

EXAMPLE --- & T Ø3 Ø7 ØB.31 4Ø.6Ø 7Ø.&

EXPLANATION --- Open a Tab Format Line, set tabs at 3, 7, 11, 49, 64, 96 and 112, and close the format line.

PAGE NUMBERING FORMAT = & N xx &

The MX-8Ø can be programmed to print between 1 and 66 lines per page. To use this routine open a Printer Format Line in the usual way. Then type the letter (N) for page numbering and then the number of lines per page that you desire as a two-digit hex number. Close up the Printer Format Line in the usual manner and you're all done. Remember to change the (PL=) variable to the new page length in Scripsit.

EXAMPLE --- & N 36 &

EXPLANATION --- Open a Printer Format Line, enter the Page Number mode, and set page length to 54 lines per page, and then close up the format line.

FORMS / VERTICAL TABBING FORMAT = & F xx xx xx xx xx &

The MX-80 can be software-controlled to feed a specified number of lines at a time rather than using single linefeeds. This saves some time and is much easier on the printer mechanisms. It is also an essential function when working with preprinted forms. The stops can be set by opening a Printer Format Line in the usual manner and then typing the letter (F) followed by the different tab settings in ascending numerical order. Close the Printer Format Line in the usual manner. Again the numerical digits should be in Hex-ASCII. notation and you may use spaces, periods or no Fill Character. You may then Insert (&V&) statements in your text wherever you want to have vertical tabs executed. If no Vertical tabs have been set when the (&V&) statement is executed, a linefeed will be executed. This can be useful because Scripsit is not aware of it.

EXAMPLE --- & F.05.0A.20.30.&

EXPLANATION --- Open a Printer Format Line and enter the Forms or Vertical Tabs mode, set vertical tabs at lines 5, 10, 32, and 48 and close the format line.

LINESPACING FORMAT = & L xx & NON-GRAPHTRAX
FORMAT = & 1 xx & WITH GRAPHTRAX

The MX-80 can be software controlled to vary the spacing between lines of print. There are 72 increments for every inch of print, giving a total of 792 dots per 11-inch page. Each increment is the same as one dot.

There are 7 dots in the formation of text characters (some take less) and 12 dots in the formation of graphics characters. There are two separate modes of operation that are already set up for two standard line spacings, 9 and 7 dots per line, and these will be covered later. The MX-80 initializes to 6 lines per inch or 12 dots per line, and will print 66 lines per page unless you change it. The range of spacings allowed by the printer is between 1 dot and 85 dots between lines. Open a Printer Format Line in the usual manner and then type the letter (L) for linespacing followed by a two-digit Hex ASCII. number representing the number of dots to a line. Then close up the Printer Format line in the normal manner. The line spacing will work as soon as the end of the current line is reached. Again spaces or periods or no Fill Character at all may be used.

EXAMPLE --- & L 12 &

EXPLANATION --- Open a format line and enter the Line spacing mode. Set the number of dots of spacing to 18 dots per line or 4 lines per inch and close up the Printer Format Line. Remember that there are (72) dots per inch available, so if we divide that by (18 dec or 12H) we would get 4 lines per inch. This is an excellent spacing for letters and correspondence.

NOTE There are a number of exact multiples that are easier to work with because they come out exactly at the bottom of the page. They are;

44 lines/page ---- 18 dots / line --- 4 lines / inch
66 lines/page ---- 12 dots / line --- 6 lines / inch
72 lines/page ---- 11 dots / line --- 6.5 lines / inch
88 lines/page ---- 9 dots / line --- 8 lines / inch
99 lines/page ---- 8 dots / line --- 9 lines / inch
132 lines/page ---- 6 dots / line --- 12 lines / inch

NOTE Any more than 8 lines per inch will exceed the maximum number of lines per page that are possible while working with Scripsit.

NOTE When you change the line spacing for one or more lines on a printed page, the printer is aware of the differences, but the Scripsit program is not. If you change the linespacing to less than the normal 12 dots per line, you will come out above the end of the page when Scripsit has counted the number of lines that you have specified.

If you have increased the number of dots per line you will go past the end of the page. Therefore, when working with changed line spacings, you must do some simple arithmetic first. Calculate the number of lines per page that you will get for the line spacing you have chosen. For example, if you have decided to have 18 dots per line, you will be able to fit 44 lines on an 11 inch page because 792, the total number of dots, divided by 18, equals 44. Always divide the total number of dots per page by the number of dots per line that you have chosen to get the number of lines per page. Some line spacings may not work out to an even number of lines per page, but they may still be used.

Now set the Page Length / (PL=) variable in Scripsit to the number of lines that you have calculated. If you are working with a spacing that comes out exactly at the bottom of the page, there is nothing more that you have to do. However, if you did not come out with an even number of lines per page, the printer will not position itself perfectly at the top of each succeeding page. It will however come out within one line of the correct position and generally within part of one line. In this case you will find it advantageous to use the Print with Pauses command (P,P) from Scripsit to print your document. This will give you the opportunity to readjust the paper to the start of each new page. When Scripsit pauses at the end of the page, turn off the printer and readjust the paper to the top of form.

When you do this you will lose any commands that you have sent to the printer. So, as soon as you press (ENTER) to start the next page, hold down (SHIFT) to enter the Pause mode and then enter the Edit mode and send the proper Printer Format Line(s) to restore the printer to its former mode of operation. Then continue as usual.

To use this type of approach requires planning but it can be quite useful in giving a really "typeset" look to your documents.

If you plan the page breaks ahead of time you may store these commands at the top of every new page.

SECTION 18.0 --- SINGLE LETTER COMMANDS ---

18.1 ---- EPSON SINGLE LETTER COMMANDS ---

WIDE-ON FORMAT = & W &

This command makes the MX-80 print expanded characters. If you are in the Condensed mode this is 66 characters per line, and in the Regular mode it is 40 characters per line. This code should be sent AFTER the corresponding (&C&) or (&R&) command. It must come PRIOR to the text that is to be printed expanded. The Wide mode will automatically be turned off by the MX-80 itself at the end of every line.

WIDE (OFF) FORMAT = & w &

This command returns the characters to their previous size. If the previous size was Condensed, it will go to 132 characters per line and if it was Regular, it will go to 80 characters per line. This is not necessary in most instances, as the MX-80 is only in the Wide mode until a Carriage Return, Line Feed, or Form Feed character is received, and will automatically return to the Regular mode at the end of every line. But it should be used if you want to print part of a line in Wide and the rest in Regular or Condensed.

CONDENSED (ON) FORMAT = & C &

This command makes the printer print condensed characters (16.5 Characters per inch), giving an effective line length of 132 characters per 8 inch line.

CONDENSED (OFF) FORMAT = & c &

This command returns the print to 80 characters per line.

REGULAR FORMAT = & R &

This command causes the printer to print 80 characters per line. It will cancel CONDENSED OR WIDE.

SINGLE FORMAT = & S &

This command makes the printer print in the Single pass mode. It turns off both Emphasized and Double. Note that this is the mode the printer is in when you turn it on.

EMPHASIZED (ON) FORMAT = & E &

This command makes the printer print in the Emphasized mode. This is the text quality or correspondence mode. The print head moves at half of it's normal speed thus creating a denser image on the paper. This mode is good for working with carbons, and good correspondence quality printing.

EMPHASIZED (OFF) FORMAT = & e &

This command will turn off the emphasized mode. Note that the Emphasized mode of operation will stay on until you turn it off or until you turn the printer off and then on again. For this reason it is a good idea to turn the printer off and then on again just before you start every printout. You may forget that the printer has already been programmed by the PREVIOUS printout and you will get unexpected results.

DOUBLE (ON) FORMAT = & D &

This command causes the printer to print double pass printing. This mode of operation shifts the carriage so that the paper moves up by 1/216 of a line and then reprints the entire line. The print speed is reduced to 40 characters per second and, if Emphasized is also used, speed is further reduced to 20 characters per second. The DOUBLE mode of operation should not be used along with DIAL-A-PRINT's multi-pass printing.

DOUBLE (OFF) FORMAT = & d &

This command turns off Double pass printing. It will remain in effect until it is turned on again.

NOTE Emphasized printing may not be used in the Condensed mode and you may not enter the Condensed mode if the Emphasized mode is on. If you try to execute Condensed Emphasized, the printer will give you Regular Emphasized. The (C) and (R) commands should never be mixed on the same physical line in Scripsit because the printer CANNOT print part of a line in Regular size type and the rest of it in Condensed type or visa versa unless you have Graphtrax.

BELL FORMAT = & B &

This command rings the bell for three seconds or less if you have Graphtrax. This handy command may be used to signal that the printing is completed or that the next page is ready or that you have reached a certain preset place in the document. This command uses the standard (Ø7H) BELL code and will probably work with any printer that has a bell.

VERTICAL TABBING FORMAT = & V &

This command executes preset vertical tabs. It will execute on the exact line you specified in the (F) or Forms statement. If no statement has been sent, a single line feed will be executed. This routine uses the (ØBH) Vertical Tab code which is common on many printers. Check your printer manual to see if it will work on your printer.

HORIZONTAL TABBING FORMAT = & H &

This command executes preset horizontal tabs. To correctly space a document using (&H&) remember that, if you are using multiple tabs on a single format line and you want to put spaces between the (H) commands within the Printer Format Line, the first tab should be placed immediately after the (&) character and the closing (&) character should be placed immediately after the last (H). If done correctly, it will look like this;

EXAMPLE --- &H H H H H H H&

This would put you exactly on the seventh tab. If done in another manner, your tabs may not print exactly on the right space, but may be one or two spaces past the correct place. This routine uses the (Ø9H) code which is the standard horizontal tab code for most printers. Check your printer manual to see if your printer responds to this code.

1/8" LINESPACING FORMAT = & 8 &

This command causes the MX-8Ø to use 1/8" line spacing or 8 lines per inch.

7/72" LINESPACING FORMAT = & 7 &

This command causes the printer to use 7/72" line spacing. This is a very tight line spacing and is not useful for very much.

18.2 --- **END OF EPSON COMMANDS** ---

This is the end of the special Epson commands. In the following section are additional commands that may be used with the Epson as well as with almost any other printer.

SECTION 19.0 --- ADDITIONAL COMMANDS ---

19.1 --- UNIVERSAL COMMANDS ---

PAGE FORMAT = & - &

This command will force a page break. It can be executed just prior to any Print/on that you want to start at the top of a new page. It has nothing to do with Scripsit's page boundaries, and Scripsit is not aware that you have used it. If you want to use it to force page breaks, set Scripsit's Format Line to TM=1 and BM=last numbered line (usually 66 unless changed). To use this command, turn the printer off, set the paper to where you want it and then turn the printer on again to begin the printout.

ALL MODE FORMAT = & A

This command allows you to print Scriptr's Printer Format Lines as well as the text. The (&A) command turns on the All mode and the only thing that will turn it off is to enter the Pause mode and press (4). There is no other way to turn it off during execution unless an error occurs or you abort the printout. It may also be done by reinitializing the printer driver by reloading Scriptr from disk. During the ALL MODE, no Printer Format Lines are executed. However DIAL-A-PRINT will still work. Format Lines are printed out just as you see them on the video display. If you neglect to turn All off, it will stay on until you do so. The (&A) command is ignored when running with (Z) or (p) in the first buffer position. It will only operate with a (P) in the first position or in normal operation. The (&A) Printer Format Line may be placed anywhere within the text. It may also be used in conjunction with the (,I) switch from Scripsit to print all of the text buffer just as it is. The All format line is the only one that does not need to be closed up by an (&) character. The ALL mode is the only mode that will allow you to print out a document containing a Printer Format Line error.

AUTO DISPLAY FORMAT = & 1 &

This function turns the display (ON) and resets the automatic Pausing feature to (OFF). In this mode the display will be reset with all timers (OFF) and the printout will proceed automatically. The lines will be displayed very quickly. This command may also be given from the keyboard during execution by pressing the (1) key.

LINE TIMER FORMAT = & 2 &

The purpose of LINE is to put a delay at the end of every line. As soon as the Line End Marker is transmitted to Scriptr when it is in the Auto mode, it sends the line end marker, waits the specified time and then proceeds. If the printer is actually printing, you will not even notice this delay as the printer takes more time to print than the delay takes. However, in the Print-Off mode the delay will be noticeable. You may change the delay from Format Lines, from the keyboard during execution, and from the Pause mode. There are (8) LINE TIMER settings that may be used. These will be discussed later.

CHARACTER TIMER FORMAT = & 3 &

This function turns (ON) the character timer. A timing delay is introduced between every character as it is sent to the screen. Again, this may be turned on from a Printer Format Line, by keyboard input during a printout, or from the Pause mode. There are eight different timing settings. This allows you 64 different speeds and configurations to use, and they all may be executed under program control.

WAIT FORMAT = & 4 &

This routine forces the display on, and forces it into the Pause mode at the end of every line. WAIT may be turned on from a Printer Format line, from the keyboard during the printout or from the Pause mode. During WAIT you may edit a line, change all of the print parameters, or do just about anything you want to. You can use Wait from within a Printer Format Line to turn the display on at a certain line to begin editing and the display will pause at every line thereafter until you turn the Wait mode off with the (1) command.

DEC LINE TIMER FORMAT = & 5 &

This routine may be entered from a Printer Format Line, from the keyboard or from the Pause mode. When executed, it reduces by 1/8 the value in the timer used at the end of lines. There are eight speeds that are available, and you may shift speeds rapidly by concatenating several of these statements on the same line.

DEC CHARACTER TIMER FORMAT = & 6 &

This routine reduces the value in the timer that is used between characters by 1/8. As with the Line timer, there are 8 speeds available, and you may shift speeds rapidly by concatenating several of the commands on the same line. For example;

```
&55555&
&66666&
```

Note that both examples would execute a reduction of their corresponding timer by 1/8, five times. By using these two commands separately and in combination, (64) different display rates are possible. Not only is Scriptr an excellent way to view a document for editing, but it also doubles as one of the most flexible Speed Readers available.

SECTION 20.0 --- USING PRINTER FORMAT LINES ---

20.1 --- CONCANTENATING FORMAT LINES ---

To save program space it has been made possible for you to concatenate more than one command within the same Printer Format Line. Concatenating means that you may put several commands in the same Printer Format Line and then use a single (&) character to close up the line. This approach saves program space and makes it easier to find these commands if they ever need to be changed. There are only a few commands that cannot be done in this manner. Any Printer Format Line that uses hexadecimal numbers as operands must be on a Printer Format Line by itself. In addition the Insert statements may not be concatenated. This means that, if we used Line Spacing, at the end of the (& L 12 &) Printer Format Line we would have to use the (&) character to close the line before we could open a new Printer Format Line on the same physial line in Scripsit. For example;

```
& L 12 &  & R E D &
```

20.2 --- EXPLANATION OF CONCANTENATING ---

This is the correct way to do it. The spaces are optional. However, notice that the Line Spacing Format Line was closed with the (&) character before we opened another Printer Format Line to put the printer in the Double Emphasized mode. Notice also that in the second Printer Format Line we have put three separate commands on the same Format Line. Additionally, notice that both of the Printer Format Lines are on the same physical line as relates to Scripsit.

20.3 --- CONCANTENATEABLE COMMANDS ---

The Printer Format Lines that do not contain hexadecimal numeric operands may all be concatenated on a single Printer Format Line. Notice that there are eight commands that are numbers; 1, 2, 3, 4, 5, 6, 7, 8. All of THESE ARE COMMANDS, NOT OPERANDS. Therefore these may be grouped on a single Printer Format Line. The following is a complete list of all of the concatenatable commands.

```
A,B,C,c,D,d,E,e,H,M,m,O,o,P,p,R,S,W,w,X,x,1,2,3,4,5,6,7,8,-
```

By grouping as many of these together as is practical you will easily be able to find all of the Printer Format Lines that are within a document by using Scripsit's Repeat and Search functions. Just search for the (&) character.

GLOSSARY OF TERMS

ABORT ---------- To end the printout of a document for any reason.

BLANK-CHARACTERS ---------- This is used to denote the 20H or space character.

BUFFER ---------- An area of memory that is set aside for the storage of information. Scriptr uses buffers for program variables, Macros, and other things.

CHAINING ---------- The act of adding text from the disk to the program in memory. This action may be done over and over again by using Scripsit's Repeat function.

CODES ---------- These are values within the range of (0 to 255)/(00H to FFH) which may represent actual characters or graphics, or printer control codes.

COMMAND-LETTERS ---------- Letters that are used within Printer Format Lines to designate the commands that Scriptr adds to the Scripsit package.

COMMANDS ---------- Ways of telling Scriptr which of its functions you want to use.

CONDENSED ---------- A mode of printing available on most printers in which the normal character width is cut nearly in half. This gives a 132 column line on 8" paper.

DECIMAL ---------- Numbers that represent factors of ten in each digit place.

DECREMENT ---------- A reduction in a value .

DELAY ---------- A pause or interval that is introduced between each character or line when text is displayed on the screen.

DELETE-CODE ---------- This is the code that the printer will accept to erase all of the characters that may already have been transmitted to its internal buffer.

DISK-BACKUP ---------- The act of copying ALL of the information from one diskette onto another diskette. You should backup your purchased diskette.

DISPLAY ---------- In Scriptr this term is used to denote the T.V. screen or monitor. A number of Printer Format Lines determine how information is to be shown on the display.

DOUBLE For the Epson MX-80, this denotes that the printer will make two passes across each line. The carriage will be shifted up by 1/216th. of an inch between the two passes.

DRIVER A program or part of a program that is used to control a device such as a printer, disk drive, cassette recorder or keyboard.

EDITING The way that data is changed on the way to the printer. Old information is deleted from the printer buffer, and new information from the screen is transmitted to the printer.

EDIT-LINE-LENGTH The number of characters that may be contained on a line as processed by either the Edit or Macro modes. The line lengths are 132 and 80, and 66 and 40 respectively. These line lengths have no connection to the actual mode that the printer is in.

EMPHASIZED In this mode the MX-80's print head strikes the paper at a slower speed in order to produce a good correspondence-quality printout.

ERROR An incorrect way of doing things. With Scriptr there are three possible error conditions. Refer to Section 15, 2-5

ERROR-MESSAGES Explanations that help you to understand what area of operation has caused the error to exist. There are three main areas. Section 15, 2-5 explains what each of the error messages means and some of the possible causes.

EXECUTION This is when the printout is actually in progress. The printer may or may not be actually printing depending on the mode of operation.

FILL-CHARACTERS Fill characters are used within Printer Format Lines to denote separations between parts of the line. Usually, they are used to separate the numeric operands. They help to make the lines easier to read.

FIRST-BUFFER-POSITION The position of the cursor when you load in Scripsit for the first time and there is nothing on the screen.

FORMAT-LINES These lines are contained within the document and are decoded by Scriptr at the time of the printout. They enable you to control the display and all of the software controlled functions of your printer.

FORMATTING ---------- The act of putting text into an ordered array. Formatted text will generally have equal line lengths, and equal borders and margins. Scripsit is a text formattimg program.

GRAPHICS-CHARACTER -------- The TRS-80 has 64 block graphics shapes which are created by using 6 pixels in different combinations. Scriptr outputs Standard codes but may be modified to output TRS-80 graphics codes.

HEXADECIMAL ---------- A numbering system that represents factors of 16 in each digit / place. All numeric operands used by Scriptr are entered in HEXADECIMAL form. This format is very consise, allowing the program to do more in less space.

INCREMENT ---------- To add one or more to a value.

INITIALIZE ---------- The act of resetting the variables used within a program to the values that were in use at the start of the program. Scriptr initializes every time that it is loaded in from the disk. Initialization also occurs when an Abort is requested and when an error occurs.

INPUT ---------- Material that you supply to the program during the execution of the printout.

INTERFACE ---------- Either hardware or software used to make two different devices or parts of a computer system work together harmoniously.

KEYBOARD ---------- The part of your computer where you type in letters and numbers by pressing the desired keys.

MACRO ---------- A commonly used sequence of characters that may be superimposed over a series of existing text lines. Macros may contain any characters.

MARKER-LINE ---------- A line containing the numbers from 1-9 and the underline character. It will help you center or line up the lines that you are entering. The marker lines extend to the 60th. position on the screen.

MEMORY ---------- The area in the hardware of the computer system where the chips that remember your text programs are located. Most TRS-80 disk systems contain either 32K or 48K of memory.

MODEMS ---------- Devices connected to a computer that can take codes representing characters of text and convert these to sound patterns so that they may be transmitted over the standard telephone lines to another computer or device.

MODIFICATIONS ---------- The changes made to a program in order to get it to work differently or with different equipment.

PARALLEL-PORT ---------- An area of memory in the TRS-80 that is set up to send information to the printer and through which full character codes are sent one at a time. This is much faster than sending single bits of information as is done with serial printers.

PARAMETERS ---------- The variables or constants that are used to determine the extent of a statement.

PAUSING ---------- A means of stopping the printout to change something in either the printer or the text material that is being transmitted.

PRINT-ON/OFF ---------- Commands that redirect the output from Scripsit either to, or away from, the printer. This enables you to start or stop printing at any place you desire.

PHYSICAL-LINE ---------- A physical line within Scripsit is always ended with either a line, page or paragraph marker or by a margin. Scriptr's format lines must not wrap around to another physical line.

PICTURE ---------- A graphic representation created using the block graphic capability of the TRS-80.

PROMPTING-MESSAGE ---------- This is a message not to exceed 32 characters that is used within Insert statements to designate what kinds of information should be inserted into this place in the document.

RAM ---------- An area of the computer's memory that may be changed.

REGULAR ---------- The normal width of characters for most microprinters. On an eight-inch line, this character size will produce 80 columns of printing.

REPEAT-COUNTER ---------- A value that tells the graphics routine how many times to repeat each code that follows it. It is always the first numeric code following the (G) or (g) in a Graphics Format Line.

ROM ---------- An area of the computer's memory that may not be changed.

SINGLE ---------- In the Epson MX-80, the printer will make only one pass across each line that it is printing.

CHARACTER REPRESENTATIONS

UPPER CASE	LOWER CASE
41H = A	61H = a
42H = B	62H = b
43H = C	63H = c
44H = D	64H = d
45H = E	65H = e
46H = F	66H = f
47H = G	67H = g
48H = H	68H = h
49H = I	69H = i
4AH = J	6AH = j
4BH = K	6BH = k
4CH = L	6CH = l
4DH = M	6DH = m
4EH = N	6EH = n
4FH = O	6FH = o
50H = P	70H = p
51H = Q	71H = q
52H = R	72H = r
53H = S	73H = s
54H = T	74H = t
55H = U	75H = u
56H = V	76H = v
57H = W	77H = w
58H = X	78H = x
59H = Y	79H = y
5AH = Z	7AH = z
5BH = [	7BH = {
5CH = \	7CH = |
5DH =]	7DH = }
5EH = ^	7EH = ~
5FH = _	7FH =

CHARACTER REPRESENTATIONS

MX-80 GRAPHICS CHARACTERS

A0 =
A1 = 
A2 =
A3 =
A4 =
A5 =
A6 =
A7 =
A8 =
A9 =
AA =
AB =
AC =
AD =
AE =
AF =
B0 =
B1 =
B2 =
B3 =
B4 =
B5 =
B6 =
B7 =
B8 =
B9 =
BA =
BB =
BC =
BD =
BE =
BF =
C0 =
C1 =
C2 =
C3 =
C4 =
C5 =
C6 =
C7 =
C8 =
C9 =
CA =
CB =
CC =
CD =
CE =
CF =
D0 =
D1 =
D2 =
D3 =
D4 =
D5 =
D6 =
D7 =
D8 =
D9 =
DA =
DB =
DC =
DD =
DE =
DF =

DECIMAL TO HEX CONVERSION TABLE

DEC	HEX	DEC	HEX	DEC	HEX	DEC	HEX
0	00	64	40	128	80	192	C0
1	01	65	41	129	81	193	C1
2	02	66	42	130	82	194	C2
3	03	67	43	131	83	195	C3
4	04	68	44	132	84	196	C4
5	05	69	45	133	85	197	C5
6	06	70	46	134	86	198	C6
7	07	71	47	135	87	199	C7
8	08	72	48	136	88	200	C8
9	09	73	49	137	89	201	C9
10	0A	74	4A	138	8A	202	CA
11	0B	75	4B	139	8B	203	CB
12	0C	76	4C	140	8C	204	CC
13	0D	77	4D	141	8D	205	CD
14	0E	78	4E	142	8E	206	CE
15	0F	79	4F	143	8F	207	CF
16	10	80	50	144	90	208	D0
17	11	81	51	145	91	209	D1
18	12	82	52	146	92	210	D2
19	13	83	53	147	93	211	D3
20	14	84	54	148	94	212	D4
21	15	85	55	149	95	213	D5
22	16	86	56	150	96	214	D6
23	17	87	57	151	97	215	D7
24	18	88	58	152	98	216	D8
25	19	89	59	153	99	217	D9
26	1A	90	5A	154	9A	218	DA
27	1B	91	5B	155	9B	219	DB
28	1C	92	5C	156	9C	220	DC
29	1D	93	5D	157	9D	221	DD
30	1E	94	5E	158	9E	222	DE
31	1F	95	5F	159	9F	223	DF
32	20	96	60	160	A0	224	E0
33	21	97	61	161	A1	225	E1
34	22	98	62	162	A2	226	E2
35	23	99	63	163	A3	227	E3
36	24	100	64	164	A4	228	E4
37	25	101	65	165	A5	229	E5
38	26	102	66	166	A6	230	E6
39	27	103	67	167	A7	231	E7
40	28	104	68	168	A8	232	E8
41	29	105	69	169	A9	233	E9
42	2A	106	6A	170	AA	234	EA
43	2B	107	6B	171	AB	235	EB
44	2C	108	6C	172	AC	236	EC
45	2D	109	6D	173	AD	237	ED
46	2E	110	6E	174	AE	238	EE
47	2F	111	6F	175	AF	239	EF
48	30	112	70	176	B0	240	F0
49	31	113	71	177	B1	241	F1
50	32	114	72	178	B2	242	F2
51	33	115	73	179	B3	243	F3
52	34	116	74	180	B4	244	F4
53	35	117	75	181	B5	245	F5
54	36	118	76	182	B6	246	F6
55	37	119	77	183	B7	247	F7
56	38	120	78	184	B8	248	F8
57	39	121	79	185	B9	249	F9
58	3A	122	7A	186	BA	250	FA
59	3B	123	7B	187	BB	251	FB
60	3C	124	7C	188	BC	252	FC
61	3D	125	7D	189	BD	253	FD
62	3E	126	7E	190	BE	254	FE
63	3F	127	7F	191	BF	255	FF

FORMAT LINE	NAME	CODE SEQUENCE
& B & -------->	BELL	07H
& C & -------->	CONDENSED/ON	0FH
& c & -------->	CONDENSED/OFF	12H
& D & -------->	DOUBLE	1BH , (G or 47H)
& d & -------->	DOUBLE/OFF	1BH , (H or 48H)
& E & -------->	EMPHASIZED	1BH , (E or 45H)
& e & -------->	EMPHASIZED/OFF	1BH , (F or 46H)
& F & -------->	FORMS	1BH , (B or 42H) ,(##) ,0
& G & -------->	GRAPHICS	All user supplied values.
& H & -------->	HORIZONTAL TABS	09H
& L & -------->	LINESPACING	1BH , (A or 41H) , (##)
& N & -------->	PAGENUMBERING	1BH , (C or 43H) , (##)
& R & -------->	REGULAR	14H , 12H
& S & -------->	SINGLE	1BH,(F or 46H),1BH,(H /48H)
& T & -------->	TABSETTING	1BH , (B or 42H) ,(##),0
& V & -------->	VERTICAL TABS	0BH
& W & -------->	WIDE/ON	0EH
& w & -------->	WIDE/OFF	14H

SCRIPTR

PRINTER FORMAT LINE LISTING

LINE	NAME	(ON)
&A	ALL MODE	(ON)
&B&	BELL	(ON)
&bxx&	BACKSPACE	(ON)
&C&	CONDENSED	(ON)
&D&	DOUBLE	(ON)
&E&	EMPHASIZED	(ON)
&Fxx&	VERTICAL TAB SET	
&Grrcc&	GRAPHICS MODE	(NS)
&H&	HORIZONTAL TABBING	
&I...&	INSERT PRINTER ONLY	
&Lxx&	LINESPACING MX-80	
&M&	MACRO'S	(ON)
&Nxx&	PAGENUMBERING	
&O&	(6) CONTROL'S	(ON)
&P&	PRINT	(ON)
&R&	REGULAR	(ON)
&S&	SINGLE PASS	(ON)
&Txx&	SET HORIZONTAL TABS	
&V&	EXECUTE TABS (VERT)	
&W&	WIDE PRINTING	(ON)
&X&	STORE MACRO FROM TEXT	
&1&	RESET TIMERS AND PAUSING	
&2&	TURN (ON) LINE TIMER	
&3&	TURN (ON) CHARACTER TIMER	
&4&	AUTOMATIC PAUSING	
&5&	DECREMENT LINE TIMER	
&6&	DECREMENT CHARACTER TIMER	
&7&	7/72" LINE SPACING	
&8&	8 LINES PER INCH SPACING	

LINE	NAME	(OFF)
PRESS (4) FROM PAUSE MODE		
&b &	LEAVE BLANKS	
&c&	CONDENSED	(OFF)
&d&	DOUBLE	(OFF)
&e&	EMPHASIZED	(OFF)
&V&	EXECUTE TABS	
&grrcc&	GRAPHICS MODE EXECUTION COMMAND	
&i...&	INSERT TEXT+PRINTER	
&lxx&	SPACING-GRAPHTRAX	
&m&	MACRO'S	(OFF)
&o&	(6) CONTROL'S	(OFF)
&p&	PRINT	(OFF)
&r&	POWER-ON RESET	
&w&	WIDE PRINT	(OFF)
&x&	CHANGE MACRO + STORE DURING PRINTOUT	
	OR PRESS (1)	
	OR PRESS (2)	
	OR PRESS (3)	
	OR PRESS (4)	
	OR PRESS (5)	
	OR PRESS (6)	

PAUSE MODE COMMANDS --->	
<SPACEBAR>	- CONTINUE
<ENTER>	- EDIT
<p>	- PICTURE
<l>	- LINEFEED
<L>	- PRINT BUFFER
<D>	- DELETE BUFFER
<O>	- PRINT (ON)
<1>	- RESET TIMERS
<2>	- LINE TIMER
<3>	- CHAR TIMER

<o>	- PRINT (OFF)
<r>	- 80 CHAR LINE
<c>	- 132 CHAR LINE
<w>	- 40/66 CHAR
<M>	- MACRO'S (ON)
<m>	- MACRO'S (OFF)
<t>	- TRS-80 GRAPHIC
<s>	- STANDARD
<4>	- AUTO PAUSING
<5>	- DEC LINE TIMER
<6>	- DEC CHAR TIMER

NOTE - PRESS <4> TO TURN OFF THE ALL MODE OF OPERATION
PRESS <H>/<h> FOR MODEL 3 TAPE LOADING CHANGES